

CLAIMS

[1] A surface pressure applying device for a slide valve that comprises: a housing (1) fixed to a bottom surface of a molten metal vessel (2); a clamp (3) supportedly provided to the housing (1) in a manner that allows the clamp (3) to open and close; and a slide case (5) housed movably within the clamp (3) and connected to plate driving means (4), the housing (1), the clamp (3), and the slide case (5) forming a space (6) in which at least two plate bricks (a first plate brick (7) and a second plate brick (8)) are installed, the plate driving means (4) causing one of the plate bricks (7, 8) to slide to change an opening of each of nozzle holes (7a, 8a) formed in the plate bricks (7, 8), respectively, and control the outflow of molten metal,

characterized by comprising: a pair of spring holders (12); surface pressure releasing plates (13) with projections (14); and a surface pressure releasing bar (15) with a wedge portion (16), the spring holders (12) each containing plural compression springs (11) and flanking the housing (1) in a direction parallel with a direction in which the slide case (5) slides, the surface pressure releasing plates (13) being placed under the spring holders (12) in a manner that allows the surface pressure releasing plates (13) to move up and down integrally with the spring holders (12), the surface pressure releasing bar (15) being placed between the housing (1) and the surface pressure releasing plates (13), the wedge

portion (16) being tapered on a slide contact surface on which the wedge portion (16) is in slidable contact with the projections (14) of the surface pressure releasing plates (13), the projections (14) and the compression springs (11) being arranged such that an arrangement center (A) of peaks of the projections (14) coincides with an arrangement center (B) of the compression springs (11), and

characterized in that the surface pressure releasing bar (15) is slid while connected to the plate driving means (4) by a connecting pin (22), to lift or depress the surface pressure releasing plates (13) and thereby release or apply surface pressure, the spring holders (12) being equipped with surface pressure applying hooks (20) for engaging with the clamp (3) when the surface pressure is applied and disengaging from the clamp (3) when the surface pressure is released.

[2] The surface pressure applying device for a slide valve according to Claim 1, characterized in that the projections (14) comprise rollers.

[3] The surface pressure applying device for a slide valve according to Claim 1 or 2, characterized by further comprising upper rollers (30) provided on a lower surface of the housing (1) in opposition to the projections (14) in a manner in which the upper rollers (30)

is in slidable contact with the surface pressure releasing bar (15) .

[4] The surface pressure applying device for a slide valve according to any one of Claims 1 through 3, characterized in that the plate driving means (4) is connected to the surface pressure releasing bar (15) through the connecting pin (22) which is detachable.